

PPollution Prevention Progress Report



U.S. Department of Energy ■ July 1999

Albuquerque Operations Office

Grand Junction Projects Office

The Grand Junction Projects Office recycled office paper, cardboard, glass, steel, plastic, aluminum, newspaper, and magazines. This recycle/reuse activity reduced routine operations sanitary waste by approximately nine metric tons.

Los Alamos National Laboratory

The Los Alamos National Laboratory recycled 99 55-gallon drums through funding provided by the Generator Set-Aside Fee program. This recycle/reuse activity reduced routine operations low-level radioactive waste by approximately 10 cubic meters, for a reported cost savings/avoidance of \$159,795.

Waste Isolation Pilot Plant

Stainless and unprepared steel were sold for recycling. This recycle/reuse activity reduced routine operations sanitary waste by approximately five metric tons, for a reported cost savings/avoidance of approximately \$3,348.

Chicago Operations Office

Argonne National Laboratory-East

Scrap metal was recycled, reducing routine operations sanitary waste by approximately

89 metric tons, for a reported cost savings/avoidance of \$36,259.

Fifty-six gas cylinder bottles were sent offsite for recycling and reuse. This recycle/reuse activity reduced routine operations hazardous waste by one metric ton, for a reported cost savings/avoidance of \$13,000.

Argonne National Laboratory-West

Retrieval of spent nuclear fuel from the Radioactive Scrap and Waste Facility has allowed the recovery of 30 shield plugs from the remote-handled containers. The shield plugs, which are lead encased in steel, will be reused in subsequent remote-handled containers. This recycle/reuse activity reduced routine operations low-level mixed waste by approximately one cubic meter, for a reported cost savings/avoidance of \$56,400.

During upgrades of the Fuel Cycle Facility Hot Repair Area, two radioactively contaminated bag-out filter housings that had been removed from another facility were reused in the Hot Repair Area. In addition, a radioactively contaminated ventilation blower was removed from standby service and installed, with slight modifications, in a ventilation exhaust system designed for the Hot Repair Area upgrade project. These recycle/reuse activities reduced routine operations low-level radioactive waste by approximately two cubic meters, for a reported cost savings/avoidance of \$16,600.

Idaho Operations Office

Idaho National Engineering and Environmental Laboratory (INEEL)

A new Vacuum Excavation Tool used by the Idaho Nuclear Technology and Engineering Center enabled excavation of inaccessible contaminated areas more rapidly than with conventional methods, and reduced project and waste generation costs. This source reduction activity reduced low-level radioactive waste by approximately 11 cubic meters, for a reported cost savings/avoidance of \$207,000.

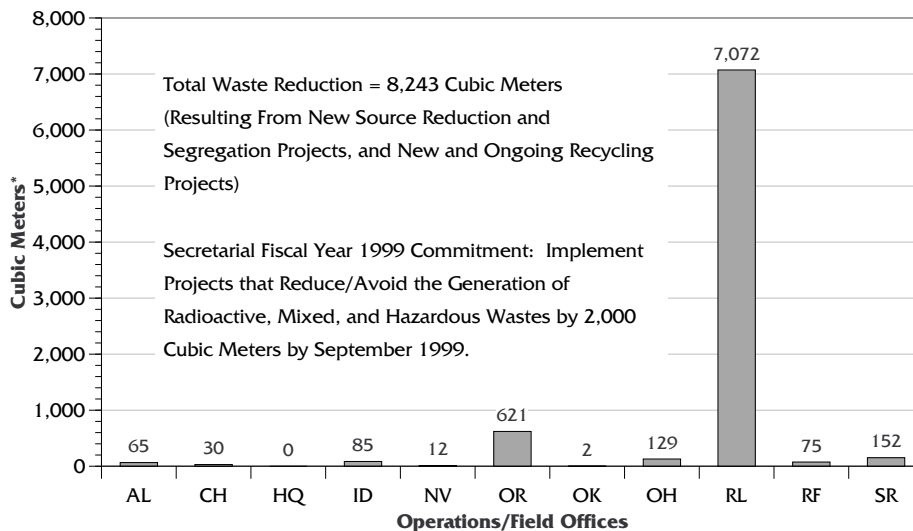
INEEL purchased only remanufactured toner cartridges for its laser printers, and then recycled the spent cartridges. This recycle/reuse activity reduced routine operations hazardous waste by approximately two

PP Quarterly Facts

Jan. '99 – Mar. '99

- 81 radioactive, mixed, and hazardous waste pollution prevention projects completed.
- 8,243 cubic meters of radioactive, mixed, and hazardous waste reduced.
- \$3.2 million reported cost savings/avoidance.

Radioactive, Mixed, and Hazardous Waste Reductions for All Operations Offices (Routine Operations and Cleanup/Stabilization), January 1999 – March 1999



*Assuming one cubic meter is equivalent to one metric ton.

metric tons, for a reported cost savings/avoidance of \$83,955.

Soft-sided waste baggies were used instead of wooden boxes at the Radioactive Waste Management Complex. This source reduction activity reduced low-level radioactive waste by 25 cubic meters, for a reported cost savings/avoidance of \$30,325.

Nevada Operations Office Nevada Test Site

Unneeded copier machine supplies were collected, and approximately 50 percent were redistributed within the Nevada Operations Office and the Nevada Environmental Protection Agency. The remaining unneeded supplies were returned to the vendor for credit. This recycle/reuse activity reduced routine operations sanitary waste by 0.39 metric tons, for a reported cost savings/avoidance of \$32,000.

Ferrous, nonferrous, and light steel scrap metals were recycled.

This recycle/reuse activity reduced routine operations sanitary waste by approximately 348 metric tons, for a reported cost savings/avoidance of \$9,159.

Oak Ridge Operations Office Portsmouth Gaseous Diffusion Plant

Empty drums formerly used for radioactive legacy waste were

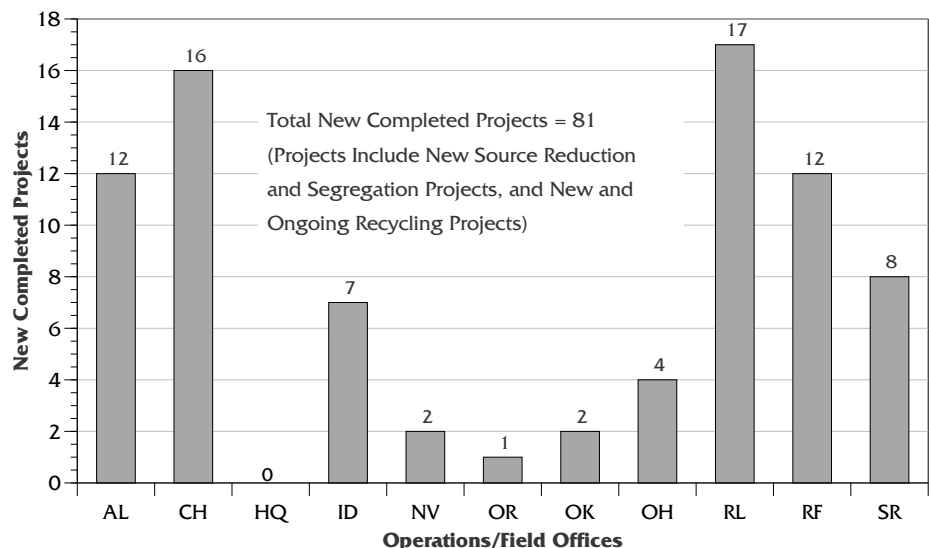
shipped offsite for recycling and reuse. This recycle/reuse activity reduced routine operations low-level radioactive waste by 621 cubic meters, for an undetermined cost savings/avoidance.

Approximately 5,700 oversized oak pallets were sent offsite for recycling and reuse. This recycle/reuse activity reduced routine operations sanitary waste by 324 metric tons, with no cost savings/avoidance.

Oakland Operations Office Lawrence Berkeley National Laboratory

New chemical imaging and labeling devices were used across the facility, resulting in source reductions in low-level radioactive and photochemical wastes. This source reduction activity reduced routine operations low-level radioactive waste by one cubic meter, for a reported cost savings/avoidance of \$74,000.

New Completed Projects for Radioactive, Mixed, and Hazardous Wastes for All Operations Offices (Routine Operations and Cleanup/Stabilization), January 1999 – March 1999



Ohio Field Office

Fernald Environmental Management Project

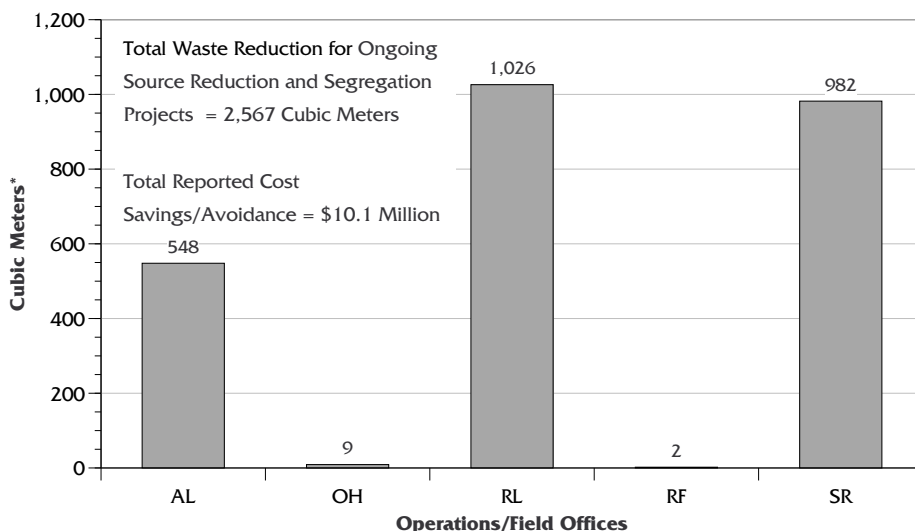
A "Green Is Clean" program diverted nonradiologically contaminated office waste to the sanitary landfill, avoiding disposal as low-level radioactive waste. This segregation activity reduced routine operations low-level radioactive waste by approximately 127 cubic meters, for a reported cost savings/avoidance of \$22,080.

West Valley Demonstration Project

Five thousand excess concrete blocks from construction projects were donated to a local vocational school for reuse. This recycle/reuse activity reduced routine operations sanitary waste by approximately 86 metric tons, for a reported cost savings/avoidance of \$3,325.

Used oil was sent offsite for recycling. This recycle/reuse activity reduced routine operations hazardous waste by 0.28 metric

Radioactive, Mixed, and Hazardous Waste Reductions for Ongoing Source Reduction and Segregation Projects for All Operations Offices (Routine Operations and Cleanup/Stabilization), January 1999 – March 1999



*Assuming one cubic meter is equivalent to one metric ton.

tons, for a reported cost savings/avoidance of \$235.

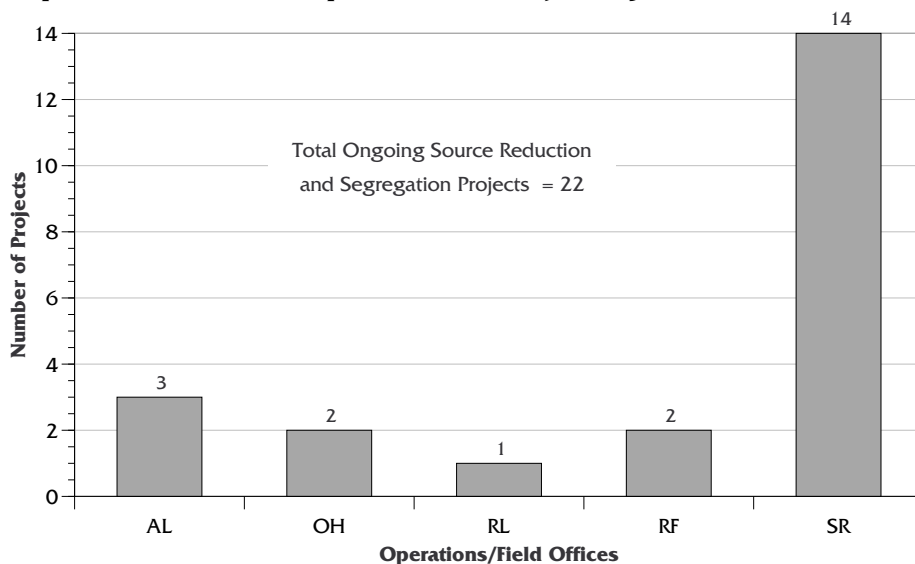
Richland Operations Office

Hanford Site

The Environmental Restoration Contractor analytical team was able to use Return-on-Investment

funded field screening technologies and "pothole" excavations to better define the thickness of the clean overburden (clean soil that overlies contaminated soil at various remediation sites), resulting in a greater volume of soil which did not require disposal. This source reduction activity reduced cleanup/stabilization low-level radioactive waste by 7,000 cubic meters, for a reported cost savings/avoidance of \$628,215.

Ongoing Source Reduction and Segregation Projects for Radioactive, Mixed, and Hazardous Wastes for All Operations Offices (Routine Operations and Cleanup/Stabilization), January 1999 – March 1999



Pacific Northwest National Laboratory (PNNL)

A new process for soil testing was implemented enabling a smaller sample size and fewer tests. This source reduction activity reduced routine operations low-level mixed waste by approximately three cubic meters, for a reported cost savings/avoidance of \$600,000.

A gas chromatograph method was developed for protein binding studies that completely eliminated the need to perform these studies

Pollution **P**revention **Recognition**

The **Argonne National Laboratory-East** managed the completion of the installation, testing, and acceptance of two excessed sludge pumps from DuPage County. The new pumps will allow for the eventual implementation of a sludge recycling program between Argonne National Laboratory-East and DuPage County.

The **Hanford Site** incorporated the use of the Automated Job Hazard Analysis computer software program to identify hazards and anticipated waste generation in advance, and to indicate appropriate waste minimization controls and techniques.

The **Idaho National Engineering and Environmental Laboratory's** Nuclear Technology and Engineering Center Facility reduced process wastewater as a result of increased recycling and sampling inside the New Waste Calcining Facility.

The **Lawrence Livermore National Laboratory** published a report, "1997 Comprehensive Opportunity Assessment for Pollution Prevention at LLNL" (UCRL-AR-127890-97), in January 1999. The report details sources of the top 20 wastestreams, and suggests pollution prevention methods and opportunities that can be applied to these wastestreams.

using a radiological counting method, which eliminated the generation of low-level radioactive waste. This source reduction activity reduced routine operations low-level radioactive waste by approximately one cubic meter, for a reported cost savings/avoidance of \$15,000.

Rocky Flats Field Office

Rocky Flats Environmental Technology Site

Stainless steel, copper, iron, lead, and aluminum recovered from decontamination and decommissioning activities is recycled. This recycle/reuse activity reduced routine operations sanitary waste by approximately 285 metric tons, for a reported cost savings/avoidance of \$18,385.

Building 707 Operations disassembled a number of old pit transfer carts formerly used in process operations, and the resulting elemental lead sheets were segregated, surveyed, and free-released for reuse. This segregation activity reduced cleanup/stabilization low-level mixed waste by approximately two cubic meters, for a reported cost savings/avoidance of \$16,600.

Miscellaneous materials collected during the cleanup of Room 157 in Building 771 were surveyed and released for disposal or auction, including Personal Protective Equipment, scales, boxes of signs, parts bins, hot plates, and rope. This segregation activity reduced cleanup/stabilization low-level radioactive waste by approximately nine cubic

meters, for a reported cost savings/avoidance of \$4,266.

Savannah River Operations Office

Savannah River Site

A spent Melt Cask identified for mixed waste disposal was successfully decontaminated by the Decontamination Facility for free-release for repair and reuse by the Tritium Facility. This segregation activity reduced routine operations low-level mixed waste by approximately four cubic meters, for a reported cost savings/avoidance of \$127,107.

The Mixed Waste Disposal Facility decontaminated legacy lead for reuse onsite, avoiding offsite treatment and disposal. This segregation activity reduced routine operations low-level mixed waste by approximately five cubic meters, for a reported cost savings/avoidance of \$36,900.

Radioactively contaminated scrap metal remaining from a Beneficial Reuse Integrated Demonstration was shipped to the Oak Ridge Center of Excellence for Metals Recycle for recycling. This recycle/reuse activity reduced routine operations low-level radioactive waste by approximately five cubic meters, for a reported cost savings/avoidance of \$20,000.

**For more information,
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